WHAT IS CLAIMED IS:

1. An electrochemical system for scale treatment and eradicating bacteria in water supply systems, the electrochemical system comprising:

(a) a storage tank for storing water including:

(i) at least a first inlet for introducing said water to said tank, said first inlet having a turbulence-providing mechanism for promoting turbulence and suspending solids in a lower region of said tank, and

(ii) at least a first outlet for discharging said water from said tank;

(b) an electrochemical cell including:

(i) a metallic tank for receiving an effluent from said storage tank, said metallic tank forming a cathode of said electrochemical cell, and

(ii) at least one anode, disposed within said metallic tank; and

(c) a DC electrical supply source operatively connected to said electrochemical cell,

wherein said electrochemical cell is operative to reduce activity of bacteria in said effluent.

2. The electrochemical system of claim 1, wherein said electrochemical cell is operative for producing a pH above 12 near walls of said metallic tank, so as to form a bacteria-containing precipitate on said walls of said metallic tank, thereby removing said bacteria from said effluent.

3. The electrochemical system of claim 1, wherein said turbulence-providing mechanism is driven by said water introduced to said storage tank via said first inlet.

4. The electrochemical system of claim 1, wherein said turbulence-providing mechanism directs said water into said lower region of said storage tank water so as to

promote turbulence and suspend solids in said lower region.

5. The electrochemical system of claim 1, further comprising:

(d) a pumping mechanism for pumping an aqueous effluent stream from said electrochemical cell through a heat-exchange device, so as to heat said stream and thereby further reduce said activity of said bacteria.

6. The electrochemical system of claim 1, wherein said bacteria include Legionella Pneumophila.

7. The electrochemical system of claim 1, wherein said anode includes a material selected from the group consisting of an alloy of TiNiO and a metal coated by an alloy of TiNiO.

8. The electrochemical system of claim 2, wherein said electrochemical cell further includes:

(iii) an elastic scraper, said scraper operative for scraping said walls of said metallic tank, so as to remove said bacteria-containing precipitate from said walls.

9. A combined electrochemical system for scale treatment and eradicating bacteria in water supply systems comprising:

(a) a first electrochemical cell including:

(i) a first metallic tank for receiving a water supply, said tank forming a cathode of said first electrochemical cell, and

(ii) a first anode, disposed within said tank;

(b) a second electrochemical cell including:

(i) a second metallic tank for receiving an effluent from said first tank, said second tank forming a cathode of said second electrochemical cell, and

(ii) a second anode, disposed within said second tank; and

(c) a DC electrical supply source operatively connected to said first cell and said second cell,

said first electrochemical cell operative for trapping bacteria in a colloid-like structure, said second electrochemical cell operative for producing a pH above 12 near walls of said second tank, so as to form a bacteria-containing precipitate on said walls of said second tank, thereby removing said bacteria from said effluent.

10. The combined electrochemical system of claim 9, wherein said first anode is made of a material selected from the group consisting of aluminum, magnesium, and zinc.

11. The combined electrochemical system of claim 9, wherein said second anode includes a material selected from the group consisting of an alloy of TiNiO and a metal coated by an alloy of TiNiO.

12. The combined electrochemical system of claim 9, wherein said second cell further includes:

(iii) an elastic scraper, said scraper operative for scraping said walls of said second tank, so as to remove said bacteria-containing precipitate from said walls.

13. The combined electrochemical system of claim 9, wherein said bacteria include Legionella Pneumophila.

14. An electrochemical method of scale treatment and eradicating bacteria in water

supply systems comprising the steps of:

(a) providing a system including:

(i) a first electro-chemical cell including:

(I) a first metallic tank for receiving a water supply, said tank forming a cathode of said first electro-chemical cell, and

(II) a first anode, disposed within said tank;

(ii) a second electro-chemical cell including:

(I) a second metallic tank for receiving an effluent from said first tank, said second tank forming a cathode of said second electro-chemical cell, and

(II) a second anode, disposed within said second tank;

(b) supplying electrical power to said cells by means of a DC electrical supply source;

(c) trapping bacteria in a colloid-like structure in said first tank, and

(d) precipitating a precipitate in said second tank, said precipitate containing said bacteria.

15. The combined electrochemical method of claim 14, wherein said bacteria is Legionella Pneumophila.